

NOTES ON THE NEOTROPICAL GENUS *TAURITERMES*, WITH A NEW SPECIES FROM BRASIL (ISOPTERA, KALOTERMITIDAE)

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ABSTRACT

T. vitulus, n. sp., is described from southern Brazil, including the imago-caste, previously unknown in this genus. The genus is redescribed and compared to the other *Kalotermitid* genera. An addition to the key of Krishna (1961) is presented.

Tauritermes was proposed by Krishna (1961) for *Calotermes taurocephalus* and *Calotermes triceromegas*, both described by Silvestri (1901).

The measurements used in this paper are explained by Emerson (1945 : 438; 1952 : 482) and Krishna & Emerson (1962 : 2). All the material studied is in the collection of the Museu de Zoologia, Universidade de São Paulo, Brazil.

Tauritermes Krishna, 1961

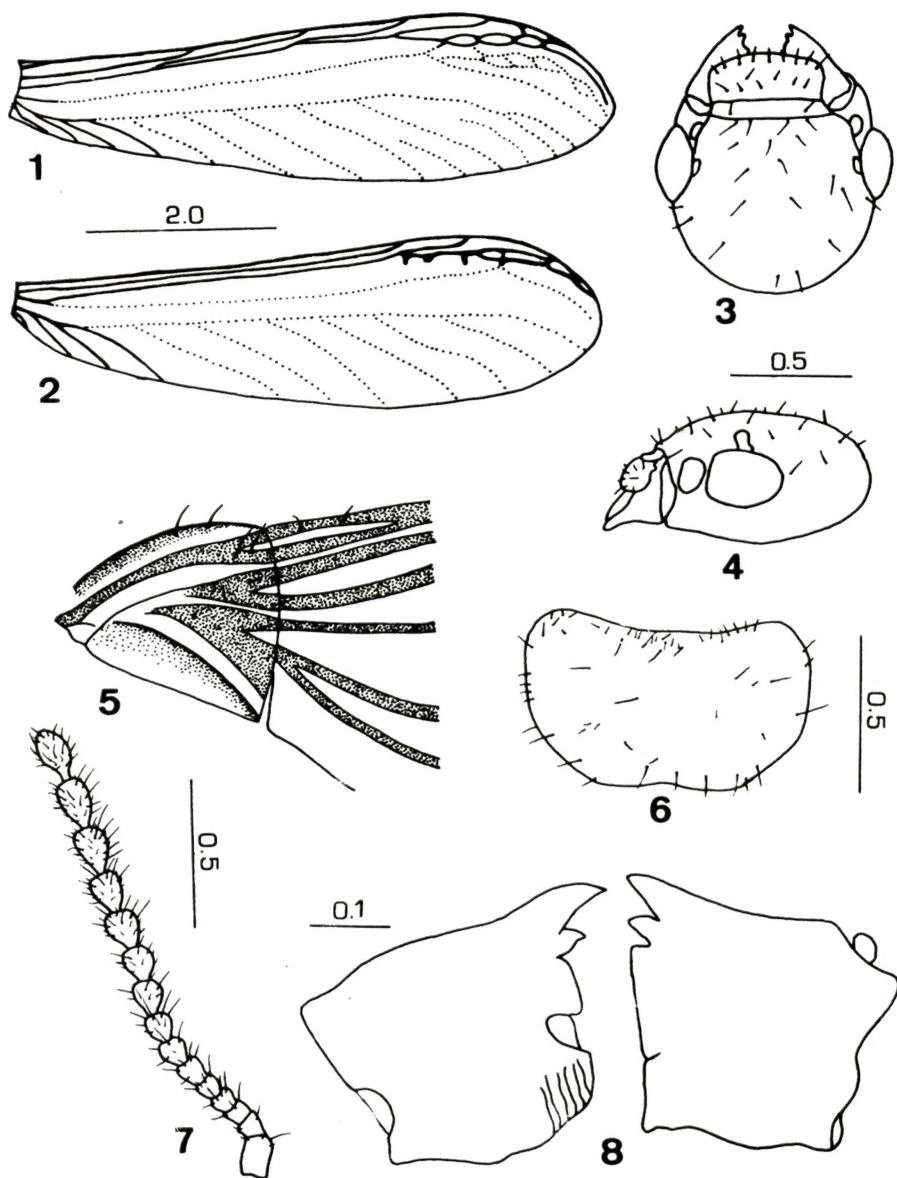
Tauritermes Krishna, 1961 : 316, 317, 361 - 363, 385, 387, 389; Araujo, 1970 : 531, 532 540, 1977 : 24.

Type-species: *Calotermes taurocephalus* Silvestri, 1901 (original designation).

Imago. Left mandible (fig. 8): first plus second marginal tooth smaller than third marginal tooth; anterior margin of third marginal tooth distinctly (about one and one half times) longer than posterior margin of first plus second marginal tooth. Right mandible (fig. 8): molar plate shorter than posterior margin of second marginal tooth. Wings transparent. Forewing (figs. 1, 5) with all major veins arising independently at wing suture; radius extending about one third length of wing from suture; radial sector with about three to five branches, the first arising at about one fourth length of wing from suture; media weak, unsclerotised, running clearly to tip of wings, midway between radial sector and cubitus; cross branches between radial sector and media at posterior half of wing; cubitus weak and unsclerotised. Ocellus touching eye. Pronotum slightly narrower than head. Tibial spurs 3 : 3 : 3. Arolium present.

Comparisons and discussion. Krishna (1961) placed the Neotropical genus *Tauritermes* near the worldwide *Incisitermes* (18 species in the neotropics), the New-World *Marginitermes* (Nearctic) and *Proneotermes* (Neotropical), and the Malagasy *Allotermes*, as all the imagoes

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T. vitulus, imago: 1, forewing; 2, hind wing; 3, head, dorsal; 4, head, lateral; 5, forewing scale and base of forewing; 6, pronotum; 7, antennae; 8, mandibles. Figures at same scale: 1-2; 3-4; 5 and 7; 6; 8. Scales in millimeters.

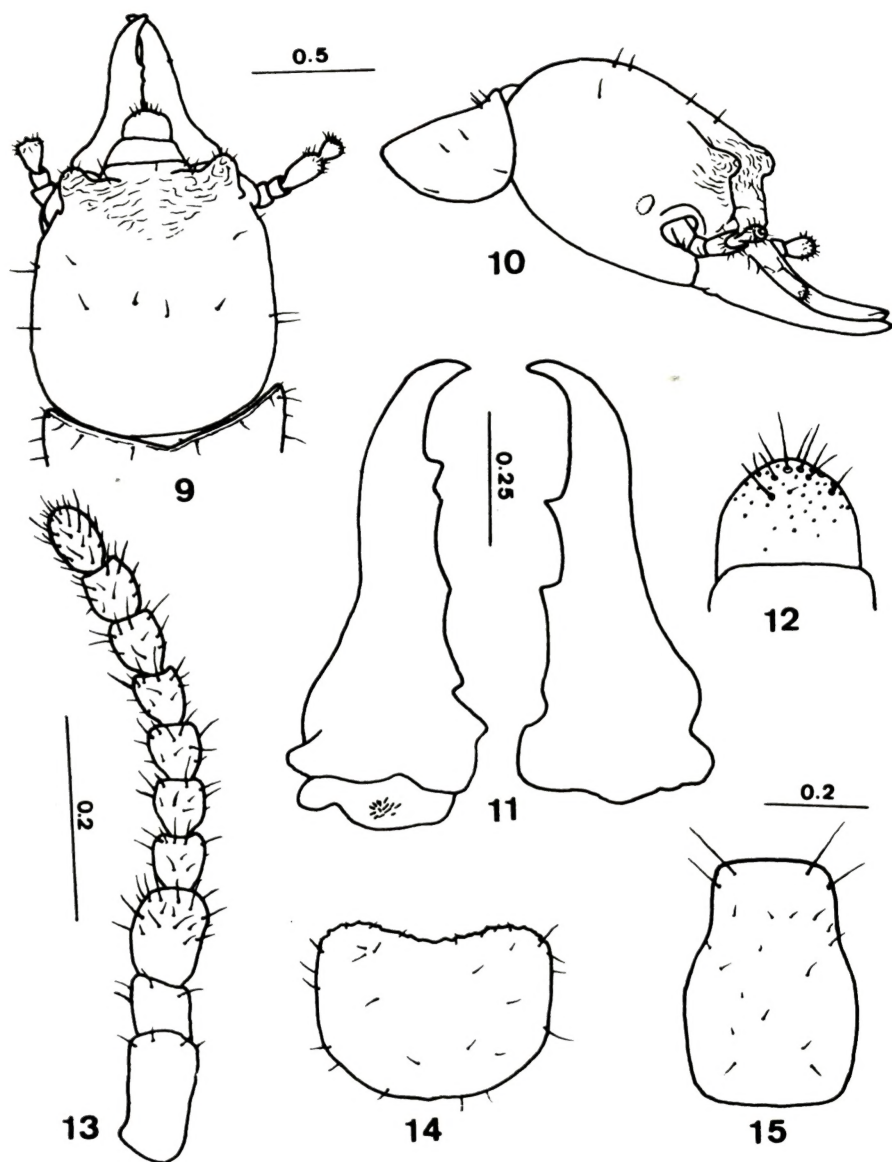
have: left mandible with first plus second marginal tooth smaller than third marginal tooth; all major veins of forewing arising independently at wing suture, with media running parallel to radial sector and cubitus, to tip of wing; no additional spines at middle tibia. He based his conclusions about *Tauritermes* on the nymph; the present discovery of the imago-caste of the genus corroborates that statement. The imago of *Incisitermes*, *Marginitermes* and *Proneotermes* differ by the left mandible (1. c., figs. 46, *Incisitermes*; 53, *Marginitermes*; 59, *Proneotermes*) with the posterior margin of the first plus second marginal tooth only slightly shorter than the anterior margin of the third marginal tooth. In *Incisitermes* the pronotum is as broad as or broader than the head and some species are dark brown and/or have no arolium; in *Marginitermes* the arolium is absent; and in *Proneotermes* the media is slightly sclerotised and runs closer to the radial sector than to the cubitus (1. c., fig. 60), the first plus second marginal tooth of the left mandible is only slightly shorter at base than the third marginal tooth, and the pronotum is slightly broader than the head. The imago of *Tauritermes* is apparently closer to that of *Allotermes* than to those of other related genera, by the similarities of the mandibles; *Allotermes* differs by the left mandible (1. c., fig. 50) with the posterior margin of the first plus second marginal tooth with half the length of the anterior margin of the third marginal tooth, and by the absence of arolium.

Soldier. Head (figs. 9, 10) with distinct anterolateral prominences; no horn-like projection near antennal socket; frontal prominences and surface between them dark and sculptured. Sides of head almost straight. Antennal carina slightly prominent, rounded. Eyes distinct and unpigmented. Antenna (fig. 13) with 10 - 11 articles (occasionally 9); third article longer and wider than second and fourth. Mandibles (fig. 9 - 11) slender, with marked basal hump. Pronotum (fig. 14) as broad as head; anterior margin raised and covering posterior margin of head, deeply emarginate, sinuate and serrated. Femur not swollen. Tibial spurs 3 : 3 : 3; no enlarged front tibia apical spur.

Comparisons and discussion. In his diagnose, Krishna (1961) considers the concavity between the frontal projections of the head of the soldier as being of generic value; this is not so, as we examined specimens of a unidentified species of *Tauritermes* in which the surface between those prominences is evenly plane. The soldier of *Tauritermes* differs from those of the related genera by the two distinct frontal projections.

Addition to the key to imagoes of Krishna (1961), modified:

17. Left mandible with the anterior margin of the third marginal tooth one and one half (or more) times longer than the posterior margin of the first plus second marginal tooth 18
- Left mandible with the anterior margin of the third marginal tooth only slightly longer than the posterior margin of the first plus second marginal tooth 19
18. Arolium present; Neotropical *Tauritermes*
Arolium absent; Malagasy *Allotermes*
19. Arolium usually present, occasionally absent *Incisitermes*
Arolium always absent *Marginitermes*



T. vitulus, soldier: 9, head, dorsal; 10, head, lateral; 11, mandibles; 12, labrum; 13, antennae; 14, pronotum; 15, postmentum. Figures at same scale: 9-10, 14; 11; 12-13; 15. Scales in millimeters.

Tauritermes vitulus, n. sp.

(Figs. 1 - 15)

Imago. Top and sides of head light orange-brown; underside lighter, yellow-brown, the postmentum brownish-yellow. Labrum and antenna brownish-yellow. Bases of mandibles same color as top of head, shading to very dark brown at dentition. Pronotum a little lighter than top of head, orange-brown; anterior margin dark brown. Meso- and metanotum a little paler than pronotum, yellow-brown; middle line dark brown. Remaining thoracic sclerites brownish-yellow. Wing scales same color as pronotum, semitransparent. Legs brownish-yellow; tibia a little darker than femur. Tergites same color as top of head, or paler; sternites pale brownish-yellow to white. Bristles pale. Top of head with few, scarcely visible, relatively short bristles (figs. 3, 4). Labrum with relatively short bristles, disposed as in fig. 3. Pronotum with a few, long and short bristles (fig. 6) near margin and on the disc. Wing scales with a few, short bristles. Wings without bristles, except for the anterior row of very short ones, spacing larger than their lengths. Tergites and sternites with one subapical row of long bristles (longer than those on head and pronotum) and one apical row of short bristles; long bristles of sternites longer than the tergal ones. Margin of head subcircular immediately behind the eyes. Epicranial suture indistinct. Eyes medium sized, not circular or prominent. Ocelli oblique, touching eyes. Antenna (fig. 7) about same length as head and pronotum, with 15 articles (rarely 14); scape longer than II; III - V about same length, shorter than II; VI - XIV increasing gradually in length. Labrum as in fig. 3. Pronotum (fig. 6) a little narrower than head; anterior margin feebly concave; posterior margin emarginate; angles rounded. Hind margin of meso- and metanotum straight. Wings as figured. Arolium not prominent.

Measurements (in millimeters) of 10 imagoes (0341). Length of head to side base of mandibles, 0.81-0.86; width of head, 0.86-0.92; diameter of eye, 0.21-0.27; eye from lower margin, 0.11-0.16; length of ocellus, 0.11-0.16; median length of pronotum, 0.50-0.56; maximum length of pronotum, 0.59-0.65; width of pronotum, 0.81-0.86; length of hind tibia, 0.65-0.75; length of forewing from suture, 5.60-6.16; width of forewing, 1.54-1.82.

Soldier. Head capsule brownish-red, except for the areas adjacent to the antennal sockets and mandibles, and the frons anterior to and between the frontal projections, which are contrasting, dark to very dark blackish-brown. Antenna yellowish-brown, lighter towards apex; article III more heavily sclerotised, darker. Labrum brownish-yellow. Mandibles dark to very dark reddish-brown. Pronotum pale yellow at posterior two thirds, a little darker towards anterior margin; the latter contrasting, blackish-brown; other prothoracic sclerites brownish, darker than the posterior half of pronotum. Following thoracic nota pale yellow. Legs pale yellow; femora lighter; tibial spines darker, brownish. Abdomen pale yellow to white. Bristles pale. Dorsum of head, and pronotum, with sparse, short bristles, as in figs. 9, 10 and 14. Abdominal tergites with a posterior row of very short bristles; sternites with a posterior row of long bristles. Head (figs. 9, 10) with sides feebly convex; posterior margin convex. Epicranial suture almost indistinct. Frontal projections almost globose, not projecting as a distinct ridge towards the rear. Frontal declivity evidently excavated (surface concave) between frontal prominences, with a few wrinkles, and rugulose, not very shining. Antennal carina visible from above. Antenna (fig. 13) with 10 (occasionally 9) articles, only surpassing tip of mandibles; scape longer than III; IV shorter than II. Labrum and postmentum as figured. Mandibles (fig. 11): right with 2 and left with 3 marginal denticles. Pronotum (fig. 14) with anterior margin excavated and serrated; posterior margin straight; angles rounded.

Measurements (in millimeters) of 10 soldiers (0341). Length of head to side bases of mandibles, 1.02-1.19; width of head, 0.97-1.02; height of head, 0.70-0.81; length of left mandible, 0.75-0.92; length of right mandible, 0.75-0.86; maximum length of eye, 0.10-0.16; maximum width of postmentum, 0.32-0.38; minimum width of postmentum, 0.21-0.27; length of postmentum, 0.43-0.47; median length of pronotum, 0.47-0.65; maximum length of pronotum, 0.59-0.75; width of pronotum, 0.81-1.02; length of hind tibia, 0.47-0.70.

Comparisons. The new species is readily distinguished from both *T. taurocephalus* and *T. triceromegas* by its smaller size. It also differs from *T. triceromegas* (according to Silvestri, 1903) by the antenna and left mandible; in *T. triceromegas*: third antennal article more than twice the size of fourth; and left mandible with two (one short, one minimum) denticles. Another distinctive character presented by *T. taurocephalus*, and not by the new species, are the thick triangular processes on head.

Material. BRAZIL. *Santa Catarina*: Blumenau, type colony n° 0341, imagoes (morphotype, paramorphotypes), soldiers (holotype, paratypes), nymphs, 21.II.1968, R. L. Araujo; n° 0340, imagoes, soldiers, nymphs, 27.II.1968, R. L. Araujo; n° 0422, imagoes, soldiers, 28.II.1968, R. L. Araujo; n° 5241, imagoes, soldiers, nymphs, 16.II.1974, R. L. Araujo. Itajai, n°s 0325, (soldiers, nymphs), 0326 (soldiers, nymphs), 0327 (soldiers, nymphs), 0329 (imagoes, soldiers, nymphs), 0423 (imagoes, soldiers, nymphs), 0424 (1 imago, 1 soldier, nymphs), 0426 (1 imago, 1 soldier, nymphs), 7764 (1 imago, soldiers, nymphs), 16-19.II.1968, R. L. Araujo. Itapema, n° 7645 (imagoes, soldiers, nymphs), 21.VII.1978, R. L. Araujo & L. R. Fontes.

Bionomics. N°s 0326, 0340, 0422 and 5241 were collected in hard dry boards of buildings and fences, in the cities; in the same board of n° 0422 there was a colony of *Cryptotermes brevis* (Walker, 1853). N° 0325 was found in a floor board, severely damaged by the termite, of an old house. N° 7645 was collected in a dry, very hard stake of a destroyed building, in the vicinities of the city.

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